

# Development of a drift detection and characteristic compensation for sensor

**IMPT**

Institut für  
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## Contact



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## Description

Novel sensor and sensor manufacturing technologies are being researched at the Institute of Microproduction Technology. Strain gauges can develop a drift (long-term drift), whereby the output signal (strain) changes over time during a constant input (force, torque). This measurement deviation is undesirable.

In this thesis a method for drift detection and characteristic compensation shall be developed. A FE-model or an analytical model of a reference component equipped with sensors is used as a basis. The drift detection and characteristic compensation is to be implemented and empirically validated on an existing test bench.

Scope and focus of the thesis can be adapted individually. If you are interested, please contact me by phone or mail.

## Type of thesis

Bachelor's thesis / student research project  
(Master's thesis with a more extensive scope of tasks is possible)

## Requirements

- Experience with Matlab/Simulink and/or Python
- Good knowledge in technical mechanics
- Experience in microcontroller programming (desirable)
- Experience with Beckhoff/TwinCAT (desirable)

## Start date

As of now

15.09.2023